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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/772,130	CHEN, JUN	
	Examiner	Art Unit	
	JASON K. LIN	2425	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5,6,8-16,25-33,36 and 37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,6,8-16,25-33,36 and 37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to application No. 10/772,130 filed on 09/15/2009.

Claims 1, 5, 6, 8-16, 25-33, and 36-37 are pending and have been examined

Response to Arguments

2. Applicant's arguments with respect to **Claims 1, 5, 6, 8** have been considered but are moot in view of the new ground(s) of rejection. However, some of applicant's remark(s) are to be addressed.

A) Applicant's assert on paragraph [0027-0030] that "…contrary to the Examiner's conclusion, the screen location is predetermined by the link instead of managed by the SAM..."

In response, the examiner respectfully disagrees. The claim only calls for "managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device." Even according to applicant's assertions, where the HTML engine via the link predetermines the screen location, that does not take away from the fact that this definition and management is handled by the SAM. Col 5: lines 5-15, Col 6: lines 17-32 of Jerding'982 teaches that the information is transferred to the SAM, where the SAM is used to activate the corresponding application to execute the content. Even though the screen location might be predetermined by the link, the SAM still handles the management of placing it in that screen location, managing the definition, initiation, activation of the application. What the applicant's assertions are targeted towards "the managing defining/specifying the place of one or more windows displayed on the

display device" which is not claimed, therefore, according to the presently claimed limitations, Jerding'982 continues to teach the limitation of record.

B) Applicant's assert on paragraph [0038-0049] that "…Applicant has a difficult time seeing how the Examiner's interpretation of D'Souza is not based, at least in part, on inadvertent impermissible hindsight… D'Souza is not designed to resolve the problem of launching different applications by clicking on EPG data. See [0005]. Instead D'Souza is designed to solve the problem of simplicity of textual description of EPG Data…"

In response, the examiner respectfully disagrees. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In regards to paragraph [0040] of applicant's assertions regarding paragraph 0005 of D'Souza, please note that the things listed in D'Souza are the background of the invention, stating the short comings of current systems. If applicant's look at the next paragraph of D'Souza, paragraph 0006 teaches that "there is a need for a system and method whereby a variety of editorial content items comprised of rich media may be viewed within a set of television navigation controls or an electronic program guide."

These rich editorial content items are comprised of rich media within an electronic program guide. This rich media is composed of many different content types which are very much the same as the content types of the EPG contents mentioned by the previous base references. This is discussed in further detail below…

The previous references had already taught interaction with EPG items. These items can vary depending on the type of content, such as televised programming, audio, internet, etc. Content items each in themselves is a media object with a corresponding content type that can be played with a corresponding application. The editorial items in D'Souza as evidenced, but not restricted to those in Paragraph 0037-0038 in D'Souza are no different. They consist of among other things, but are not restricted to text, interactive content items, video, etc. D'Souza's content items are very much similar to the contents as those described by the previous base references used before D'Souza. The previous references used such as Ellis and Knudson teaches multiple content items on an EPG, but were silent about the use of a virtual tuner to manage the execution of such contents. D'Souza containing similar contents types such as those in Ellis and Knudson was used in combination, to teach such concepts of the virtual tuner. D'Souza, Ellis, and Knudson are not different, and contain similar content types. Such a combination is not restrictive to the fact that merely a content item is shown on an EPG or not, content items shown simultaneously on an EPG are already covered by Ellis and Knudson, what was missing from those two references was the explicit teachings of a virtual tuner used for executing the content, for which D'Souza teaches. Therefore, since the content items managed by the virtual tuner of D'Souza are like those

described in Ellis and Knudson, the examiner sees no reason why these references cannot be combined. The references of record continue to meet the currently claimed limitations.

3. Applicant's arguments filed 09/15/2009 regarding **Claims 16, 25-33, and 36-37** have been fully considered but they are not persuasive.

C) In response to applicant's assertions on paragraph [0052-0069], please see examiner's response in Part (B) above.

D) In response to applicant's assertions on paragraph [0077-0095], please see examiner's response in Part (B) above.

E) In response to applicant's assertions on paragraph [0097-00121], please see examiner's response in Part (B) above. In regards to "application identification table" stated in paragraph [00121] please note that Jerding'616 was used to teach this limitation and not D'Souza or Hassell.

Therefore, the current art of record teaches and continues to teach the cited limitations of record. The examiner maintains his ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1, 5, 6, and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. (US 2005/0283800), in view of Kikinis et al. (US 2008/0282311), in view of Hassell et al (2007/0033615), in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, in view of Jerding (US 6,738,982) herein after referred to as Jerding'982, in view of Lorkovic (US 2004/0117835), and further in view of Paz et al. (US 2002/0053075).

Consider **claim 1,** Ellis teaches a method comprising:

forming, by a client which is a device configured to provide virtual tuner function (Fig.2; Paragraph 0096-0098 teaches invoking the proper application to handle playback of the selected corresponding content), EPG data being processed by the EPG provider into a suitable form for storage and processed on the client (Paragraph 0067, 0098 teaches maintaining and storing program guide data at the provider. Paragraph 0061, 0098, Figs. 15, 17a teaches the program guide data is sent to the client and the client utilizes its program guide application to display the data);

receiving, by the client, EPG data from the EPG provider (Fig.1; Paragraph 0060-0062 teaches main facility 34-Fig.1 distributing program guide data to television distribution facility-Fig.1 and in turn television distribution facility-Fig.1 distributing program guide data to user television equipment 40-Fig.1);

content that is available for output through execution of one or more applications installed on the client, the one or more applications (Fig.2; Paragraph

0096-0098, 0101, 0104 teaches different applications used to output corresponding content) including:

a web browser (Web browser application 84-Fig.2; Paragraph 0069-0070, 0096 teaches a web browser application);

a game application (gaming services application 90-Fig.2; Paragraph 0069-0070, 0096 teaches a gaming application); and

an application that is utilized to output television program (70, 76 – Fig.2; Paragraph 0097, 0064 teaches output television programs);

generating, by the client a EPG for display based on EPG data received from the EPG provider and a result of the examining, the EPG including a plurality of representations of a plurality of contents for simultaneous display by the client (Paragraph 0060-0062 teaches receiving program guide data. Paragraph 0104, 0096-0098, 0101 teaches incorporating listings such as web content, video on demand, audio, games, etc alongside regular program listings) wherein:

the plurality of contents includes remote content available over the server represented by EPG data (Fig.17a; Paragraph 0098), the plurality of contents include:

a television programming for receipt by the client over a network (Fig.17a; Paragraph 0098);

a video-on-demand (VOD) (Fig.17a; Paragraph 0098, 0061); and

an interactive video game (Paragraph 0104 teaches video game content also displayed);

the EPG is configured to form one or more events in response to a user interaction with one or more said representations (Paragraph 0096-0098, 0101, 0104),

outputting by the client, the EPG (Figs.15, 17a; Paragraph 0104);

forming, by the client, a selection that identifies a content selected by a user through interaction with the EPG (0096-0098, 0101),

the client in response to the selection to unify execution of the plurality of applications, the utilizing including: managing execution of each said plurality of applications to provide respective said content represented by the EPG in response to the events formed utilizing the EPG (Paragraph 0096-0098, 0101, 0104);

terminating the said application (Paragraph 0018 teaches terminating application).

Ellis does not explicitly teach a request for Electronic Programming Guide (EPG) data for communication to a EPG provider over a network, the request including a client identification to identify the client such that the EPG provider is capable to identify an access right of the client, EPG data including data that describes characteristics of a content that is provided by a content provider remotely over the network;

examining, by the client, to find one or more locally available contents for output on the client, the locally available contents including:

a local content previously stored on the client from a broadcast of a content provider over the network; and

a local content that is available for output through execution of one or more applications installed on the client;

the plurality of contents includes local content available locally on the client;

form one or more events in response to a user interaction with one or more said representations, wherein the one or more events are based on information other than application identification information originating from the server;

the selection specifying a content type and a content ID of the selected content, the content type being utilized to indicate a type of application that is suitable for processing the content, the content ID being utilized to identify the content;

utilizing, by the client, a virtual tuner executed on the client in response to the selection to unify execution of the plurality of applications, the utilizing including:

said virtual tuner utilizing an application identification table that includes a listing of the one or more applications to enable execution of each of said plurality of applications;

launching one or more of the plurality of applications that have a content type that matches the content type of the selection;

passing the content ID to the application such that the application is capable to locate the content for output;

managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention, wherein the lifecycle includes:

launching the said application;

rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application;

managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device; and

terminating the said application when output of the content is completed;

utilizing, by the client, the virtual tuner executed on the client in response to an event, relating to a working background of the one or more applications, not to be executed by a particular application, the utilizing including:

switching from a display device to another; and

changing color of a display of rendered content; and

utilizing, by the client, the virtual tuner executed on the client in response to an event requiring additional application or hardware resource to output a content, to initiate a process to include additional functionality to output the content.

In an analogous art, Kikinis teaches a request for Electronic Programming Guide (EPG) data for communication to a EPG provider over a network, the request including a client identification to identify the client such that the EPG provider is capable to identify an access right of the client, (Fig.6; Col 6: line 37 - Col 7: line 9 teaches after identifying the client, providing the data for the IPG to the client) EPG data including data that describes characteristics of a content that is provided by a content provider remotely over the network (Col 5: lines 45-47 teaches each program might have a content identifier such as sports, news, drama, comedy, etc);

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Ellis' system to include a request for Electronic Programming Guide (EPG) data for communication to a EPG provider over a network, the request including a client identification to identify the client such that the EPG provider is capable to identify an access right of the client, EPG data including data that describes characteristics of a content that is provided by a content provider remotely over the network, as taught by Kikinis, for the advantage of automatically allowing the system to easily process and authenticate incoming users, for which the data may be restricted to authorized users, providing the

system with greater security and control over distribution of information so that it will not be transmitted to unintended viewers, and providing the client with necessary information about content, allowing the client device to easily organize and maintain information regarding content.

Ellis and Kikinis do not explicitly teach examining, by the client, to find one or more locally available contents for output on the client, the locally available contents including:

a local content previously stored on the client from a broadcast of a content provider over the network; and

a local content that is available for output through execution of one or more applications installed on the client;

the plurality of contents includes local content available locally on the client;

form one or more events in response to a user interaction with one or more said representations, wherein the one or more events are based on information other than application identification information originating from the server;

the selection specifying a content type and a content ID of the selected content, the content type being utilized to indicate a type of application that is suitable for processing the content, the content ID being utilized to identify the content;

utilizing, by the client, a virtual tuner executed on the client in response to the selection to unify execution of the plurality of applications, the utilizing including:

said virtual tuner utilizing an application identification table that includes a listing of the one or more applications to enable execution of each of said plurality of applications;

launching one or more of the plurality of applications that have a content type that matches the content type of the selection;

passing the content ID to the application such that the application is capable to locate the content for output;

managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention, wherein the lifecycle includes:

launching the said application;

rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application;

managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device; and

terminating the said application when output of the content is completed;

utilizing, by the client, the virtual tuner executed on the client in response to an event, relating to a working background of the one or more applications, not to be executed by a particular application, the utilizing including:

switching from a display device to another; and

changing color of a display of rendered content; and

utilizing, by the client, the virtual tuner executed on the client in response to an event requiring additional application or hardware resource to output a content, to initiate a process to include additional functionality to output the content.

In an analogous art, Hassell teaches examining, by the client, to find one or more locally available contents for output on the client, the locally available contents including: a local content previously stored on the client from a broadcast of a content provider over the network; and a local content that is available for output through execution of one or more applications installed on the client; the plurality of contents includes local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device 31-Fig.2 can be contained at the set-top

box 28 {client} where user equipment 22-Fig.3 is a more generalized embodiment of user equipment 22-Fig.2).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Ellis and Kikinis to include teaches examining, by the client, to find one or more locally available contents for output on the client, the locally available contents including: a local content previously stored on the client from a broadcast of a content provider over the network; and a local content that is available for output through execution of one or more applications installed on the client; the plurality of contents includes local content available locally on the client, as taught by Hassell, for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

Ellis, Kikinis, and Hassel do not explicitly teach form one or more events in response to a user interaction with one or more said representations, wherein the one or more events are based on information other than application identification information originating from the server;

the selection specifying a content type and a content ID of the selected content, the content type being utilized to indicate a type of application that is suitable for processing the content, the content ID being utilized to identify the content;

utilizing, by the client, a virtual tuner executed on the client in response to the selection to unify execution of the plurality of applications, the utilizing including:

said virtual tuner utilizing an application identification table that includes a listing of the one or more applications to enable execution of each of said plurality of applications;

launching one or more of the plurality of applications that have a content type that matches the content type of the selection;

passing the content ID to the application such that the application is capable to locate the content for output;

managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention, wherein the lifecycle includes:

launching the said application;

rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application;

managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device; and

terminating the said application when output of the content is completed;

utilizing, by the client, the virtual tuner executed on the client in response to an event, relating to a working background of the one or more applications, not to be executed by a particular application, the utilizing including:

switching from a display device to another; and

changing color of a display of rendered content; and

utilizing, by the client, the virtual tuner executed on the client in response to an event requiring additional application or hardware resource to output a content, to initiate a process to include additional functionality to output the content.

In an analogous art, D'Souza teaches a client which is a device configured to provide a virtual tuner function (Paragraph 0029, 0037-0038);

form one or more events in response to a user interaction with one or more representations, wherein the one or more events are based on information other than application identification information originating from the server (Paragraph 0029, 0037-0038);

the selection specifying a content type of the selected content, the content type being utilized to indicate a type of application that is suitable for processing the content (Paragraph 0029, 0033, 0037-0038 teaches the user selecting a particular content and the system determining the appropriate application to use

to launch the selected content by comparing to see what the content type of the selected content is),

utilizing, by the client, a virtual tuner executed on the client in response to the selection to unify execution of the plurality of applications (Paragraph 0029, 0033, 0037-0038), the utilizing including:

manage execution of each said plurality of applications to provide respective said content represented in response to the events formed; launching one or more of the plurality of applications that have a content type that matches the content type of the selection (D'Souza - application launcher 220-Fig.2; Paragraph 0029, 0037-0038 teaches software which manages the execution of each of the applications in response to events formed).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Ellis, Kikinis, and Hassel to include form one or more events in response to a user interaction with one or more said representations, wherein the one or more events are based on information other than application identification information originating from the server; the selection specifying a content type of the selected content, the content type being utilized to indicate a type of application that is suitable for processing the content; utilizing, by the client, a virtual tuner executed on the client in response to the selection to unify execution of the plurality of applications, the utilizing including: launching one or more of the plurality of applications that have a content type that matches the content type of the selection;, as taught by D'Souza, for the advantage of

allowing a variety of desired content to be launched and played to the user independently by the system, providing a more intuitive, versatile, and robust system having greater control and management over execution of content.

Ellis, Kikinis, Hassel, and D'Souza do not explicitly teach the selection specifying a content ID of the selected content, the content ID being utilized to identify the content;

said virtual tuner utilizing an application identification table that includes a listing of the one or more applications to enable execution of each of said plurality of applications;

passing the content ID to the application such that the application is capable to locate the content for output;

managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention, wherein the lifecycle includes:

launching the said application;

rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application;

managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device; and

terminating the said application when output of the content is completed;

utilizing, by the client, the virtual tuner executed on the client in response to an event, relating to a working background of the one or more applications, not to be executed by a particular application, the utilizing including:

switching from a display device to another; and

changing color of a display of rendered content; and

utilizing, by the client, the virtual tuner executed on the client in response to an event requiring additional application or hardware resource to output a content, to initiate a process to include additional functionality to output the content.

In an analogous art Jerding'616 teaches, a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications (Col 11: lines 39-56; Col 10: lines 40-54; Col 11: lines 42-46).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Ellis, Kikinis, Hassel, and D'Souza to include a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications, as taught by Jerding'616, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client.

Ellis, Kikinis, Hassel, D'Souza, and Jerding'616 do not explicitly teach teach the selection specifying a content ID of the selected content, the content ID being utilized to identify the content;

passing the content ID to the application such that the application is capable to locate the content for output;

managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention, wherein the lifecycle includes:

launching the said application;

rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application;

managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device; and

terminating the said application when output of the content is completed;

utilizing, by the client, the virtual tuner executed on the client in response to an event, relating to a working background of the one or more applications, not to be executed by a particular application, the utilizing including:

switching from a display device to another; and

changing color of a display of rendered content; and

utilizing, by the client, the virtual tuner executed on the client in response to an event requiring additional application or hardware resource to output a content, to initiate a process to include additional functionality to output the content.

In an analogous art Jerding'982 teaches the selection specifying a content ID of the selected content, the content ID being utilized to identify the content; passing the content ID to the application such that the application is capable to locate the content for output (Col 5: line 61 – Col 6: line 16, Col 6: lines 16-32 teaches the selection of content, and passing the content ID to the application so that the application can execute the designated content)

managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention (Col 3: lines 19-27, Col 4: lines 61-67 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications to output content selected from the guide. *All this is done by the application manager without user intervention*), wherein the lifecycle Col 3: lines 19-27, Col 4: lines 61-67 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications) includes:

launching the said application (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23

and SAM 29-Fig.2, and having the desired application 25-Fig.2 execute presenting the service to the user on display 21-Fig.2. Col 3: lines 19-27 teaches a service application manager (SAM) 29-Fig.2 that handles the applications; Col 7: lines 20-28);

rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application (Col 3: lines 19-27, Col 4: lines 61-67 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications to output content selected from the guide. Col 7: line 40 – Col 8: line 4 teaches presenting applications in their respective windows on the display device);

managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device (Col 7: line 40 – Col 8: line 4, Col 6: lines 1-8 teaches presenting applications in only a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the email application can be overlaid on top of an underlying program in full screen mode. It is inherent that

each application here has its own window for the overlaying and displaying of content. Col 3: lines 23-27 teaches that the SAM is in charge of the definition, initiation, activation and as taught in the previously cited paragraphs, applications are presented in portions of the display where the areas the application is displayed in can be defined and managed by the definition and activation by the SAM. Applications can also be displayed on top of other applications. Therefore, the SAM can manage applications to be displayed, but not solely limited to, on defined locations of the screen, as well as on top of other applications, effectively managing place of one or more windows on a display device); and

terminating the said application (Col 3: lines 23-27).

utilizing, by the client, the virtual tuner executed on the client in response to an event, relating to a working background of the one or more applications (Col 7: line 40 – Col 8: line 4, Col 6: lines 1-8 teaches presenting applications in only a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). *Therefore, there are one or more applications relating to a working background*);

utilizing, by the client, the virtual tuner executed on the client in response to an event (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM 29-Fig.2, and having the desired application

25-Fig.2 execute presenting the service to the user on display 21-Fig.2. Col 3: lines 19-27 teaches a service application manager (SAM) 29-Fig.2 that handles the applications; Col 7: lines 20-28).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Ellis, Kikinis, Hassel, D'Souza, and Jerding'616 to include the selection specifying a content ID of the selected content, the content ID being utilized to identify the content; passing the content ID to the application such that the application is capable to locate the content for output; managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention, wherein the lifecycle includes: launching the said application; rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application; managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device; utilizing, by the client, the virtual tuner executed on the client in response to an event, relating to a working background of the one or more applications; utilizing, by the client, the virtual tuner executed on the client in response to an event, as taught by Jerding'982, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client, and providing for the ability to emphasize and bring to a user's attention desired material, efficiently organizing

the visual display of material for the benefit of the user in order to easily view desired material.

Ellis, Kikinis, Hassel, D'Souza, Jerding'616, and Jerding'982 do not explicitly teach terminating the said application when output of the content is completed;

in response to an event, not to be executed by a particular application, the utilizing including: switching from a display device to another; and in response to an event requiring additional application or hardware resource to output a content, to initiate a process to include additional functionality to output the content.

In an analogous art, Hoarty teaches terminating the one or more applications said applications when the outputting is complete (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over, the program follows the steps of call take down {termination} as described in Col 9: lines 64-11)

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Ellis, Kikinis, Hassel, D'Souza, Jerding'616, and Jerding'982 to include terminating the one or more applications said applications when the outputting is complete, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

Ellis, Kikinis, Hassel, D'Souza, Jerding'616, and Jerding'982, and Hoarty do not explicitly teach in response to an event, not to be executed by a particular application, the utilizing including: switching from a display device to another; and in response to an event requiring additional application or hardware resource to output a content, to initiate a process to include additional functionality to output the content.

In an analogous art, Lorkovic teaches in response to an event, not to be executed by a particular application, the utilizing including: switching from a display device to another; and in response to an event requiring additional application or hardware resource to output a content, to initiate a process to include additional functionality to output the content (Fig.1; Paragraph 0030-0031, 0018-0021 teaches two display devices, wherein in response to an event, allows content to be displayed and swapped between both devices, wherein the large display is meant for viewing of movies, video and the small display provides small and close display for other content).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Ellis, Kikinis, Hassel, D'Souza, Jerding'616, Jerding'982, and Hoarty to include in response to an event, not to be executed by a particular application, the utilizing including: switching from a display device to another; and in response to an event requiring additional application or hardware resource to output a content, to initiate a process to include additional functionality to output the content, as taught by Lorkovic, for the advantage of

conveniently combining access to all media types within the home in a very convenient way, providing interaction without disruption of content being viewed (Lorkovic - Paragraph 0007-008, 0016).

Ellis, Kikinis, Hassel, and D'Souza, Jerding'616, Jerding'982, Hoarty, and Lorkovic do not explicitly teach changing color of a display of rendered content.

In an analogous art, Paz teaches changing color of a display of rendered content (Paragraph 0310).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Ellis, Kikinis, Hassel, D'Souza, Jerding'616, Jerding'982, Hoarty, and Lorkovic to include changing color of a display of rendered content, as taught by Paz, for the advantage of making the displayed elements to be more suitable for vision-challenged individuals, where such modification may be personalized to the visual abilities of a particular user (Paz – Paragraph 0310), providing a better entertainment experience for all users.

Consider **claim 5,** Ellis, Kikinis, Hassel, D'Souza, Jerding'616, Jerding'982, Hoarty, Lorkovic, and Paz teach wherein the managing of the one or more windows includes displaying the at least one said window in a foreground of a display in response to one or more said events (Jerding'982 - Col 7: line 40 – Col 8: line 4 teaches displaying an underlying application in full screen mode and an email application overlaid on top {foreground} by the SAM 37-Fig.2 of the full screen mode application when a selectable link is activated {events}).

Consider **claim 6,** Ellis, Kikinis, Hassel, D'Souza, Jerding'616, Jerding'982, Hoarty, Lorkovic, and Paz teach wherein said content provided by a first said application is not compatible with a second said application (D'Souza - Paragraph 0037-0038 teaches launching different applications based on the type of content that is to be played. *Therefore, only their corresponding application can play the selected content, so content that is executable by one application is not executable by another*).

Consider **claim 8,** Ellis, Kikinis, Hassel, D'Souza, Jerding'616, Jerding'982, Hoarty, Lorkovic, and Paz teach one or more computer readable-media comprising computer executable instructions that, when executed on a computer, direct the computer to perform the method of claim 1 (D'Souza - Paragraph 0022-0023).

6. **Claims 9, 11, 13, 14, and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823 in view of D'Souza et al. (US 2006/0117348).

Consider **claim 9,** Knudson'823 teaches, a method comprising:

receiving a selection made from a plurality of content using an EPG that is output by the client (Col 9: lines 5-14, Col 5: lines 43-46), wherein:

the EPG includes a representation of each said content for simultaneous uidedisplay by the client (Fig.10; Col 6: lines 12-19, Col 7: line 63 - Col 8: line 6, Col 9: lines 5-14);

at least one said content is television programming (Fig.10; Col 5: lines 62-63;

providing selected content represented by the EPG (Fig.10; Col 5: lines 31-48, Col 6: lines 12-28, Col 9: lines 5-10, lines 62-67 teaches selecting and providing the content represented on the EPG);

Knudson'823 does not explicitly teach a virtual tuner executed on a client;

receiving, by the virtual tuner, a selection made from a plurality of content;

each said content is provided for output by a respective one or more of a plurality of applications;

choosing, by the virtual tuner, one or more of the plurality of applications that, when executed, provide the selected content represented by the guide, wherein the choosing is independent of any application identifying information originating from a computer distinct from the client; and

managing, by the virtual tuner, execution of the chosen one or more applications to output the selected content.

In an analogous art D'Souza teaches, a virtual tuner executed on a client; receiving, by the virtual tuner, a selection made from a plurality of content (application launcher 220-Fig.2; Paragraph 0029, 0037-0038);

each said content is provided for output by a respective one or more of a plurality of applications (Paragraph 0029-0030, 0037-0038);

choosing, by the virtual tuner, one or more of the plurality of applications that, when executed, provide the selected content represented by the guide, wherein the choosing is independent of any application identifying information originating from a computer distinct from the client (application launcher 220-Fig.2; Paragraph 0029, 0037-0038 teaches software which manages the execution of each of the applications in response to events formed utilizing the guide); and

managing, by the virtual tuner, execution of the chosen one or more applications to output the selected content (Paragraph 0029, 0037-0038).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Knudson'823s system to include a virtual tuner executed on a client; receiving, by the virtual tuner, a selection made from a plurality of content; each said content is provided for output by a respective one or more of a plurality of applications; choosing, by the virtual tuner, one or more of the plurality of applications that, when executed, provide the selected content represented by the guide, wherein the choosing is independent of any application identifying information originating from a computer distinct from the client; and managing, by the virtual tuner, execution of the chosen one or more applications to output the selected content, as taught by D'Souza, for the advantage of allowing a variety of desired content to be launched and played to the user independently by the

system, providing a more intuitive, versatile, and robust system having greater control and management over execution of content.

Consider **claim 11,** Knudson'823 and D'Souza teach wherein the managing is performed in response to one or more events received from the EPG (D'Souza - Paragraph 0029, 0036).

Consider **claim 13,** Knudson'823 and D'Souza teach wherein said content provided by a first said application is not compatible with a second said application (D'Souza - Paragraph 0037-0038 teaches launching different applications based on the type of content that is to be played. *Therefore, only their corresponding application can play the selected content, so content that is executable by one application is not executable by another*).

Consider **claim 14,** Knudson'823 and D'Souza teach wherein: the managing includes managing one or more windows; and at least one of said window is utilized to display the selected content (D'Souza - Paragraph 0033).

Consider **claim 16,** Knudson'823 and D'Souza teach one or more computer readable-media comprising computer executable instructions that, when executed on a computer, direct the computer to perform the method of claim 9 (D'Souza - Paragraph 0022-0023).

7. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), and further in view of Hoarty et al. (6,305,020).

Consider **claim 10,** Knudson'823 and D'Souza teaches launching the chosen one or more applications for outputting the selected said content (D'Souza - Paragraph 0029, 0037-0038).

Knudson'823 and D'Souza does not explicitly teach terminating the chosen one or more applications when the outputting is completed or an event is received from the EPG.

In an analogous art, Hoarty teaches terminating the chosen one or more applications when the outputting is completed or an event is received from the EPG (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over, the program follows the steps of call take down {termination} as described in Col 9: lines 64-11)

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Knudson'823 and D'Souza to include terminate the chosen one or more applications when the outputting is completed or an event is received from the EPG, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

8. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), and further in view of Jerding (US 6,738,982) herein after referred to as Jerding'982.

Consider **claim 12,** Knudson'823 and D'Souza do not explicitly teach managing includes managing a lifecycle of the chosen one or more applications.

In an analogous art Jerding'982 teaches, managing includes managing a lifecycle of the chosen one or more applications (Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823 and D'Souza to include managing includes managing a lifecycle of the chosen one or more applications, as taught by Jerding'982, for the advantage of efficiently controlling the activation, suspension, and deletion of applications (Jerding'982 - Col 3: lines 25-27), optimizing the control and the use of resources available to the client device.

9. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), in view of Houghton et al. (US 2005/0021609), and further in view of Hassell et al (2007/0033615).

Consider **claim 15,** Knudson'823 and D'Souza teaches a plurality of content (Knudson - Col 9: lines 5-14, Col 5: lines 43-46; D'Souza - Paragraph 0027), but do not explicitly teach that it includes remote content available over the Internet and local content available locally on the client.

In an analogous art Houghton teaches, remote content available over the Internet (Paragraph 0009-0010 teaches receiving web content over communications card 121-Fig.4. The web content may be sports event or a continuous series of programming that is transmitted over the internet).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823 and D'Souza to include remote content available over the Internet, as taught by Houghton, for the advantage of providing programming that might have otherwise been unavailable for which a broadcast network who has viewing rights, but decides not to broadcast the event (Houghton - Paragraph 0010).

Knudson'823, D'Souza, and Houghton do not explicitly teach local content available locally on the client.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top

box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Knudson'823, D'Souza, and Houghton to include local content available locally on the client, as taught by Hassell, for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

10. **Claims 25 and 27-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), and further in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616.

Consider **claim 25,** Knudson'823 teaches a client (40-Fig.1) comprising:

a processor (Col 5: lines 5-7);

a network interface, communicatively coupled to the processor, configured to provide a network connection to a wide area network (WAN) (Fig.1, Col 1:line 61 – Col 4: line 43 teaches an entire network that the receiver is connected to {WAN}. Col 4: lines 33-43 teaches one or more uni or bidirectional communication paths to the receiver for delivery of content. *Therefore, the receiver inherently has a network interface for connecting to the outside network to receive the content via the communication path(s), and is communicatively*

coupled to the processor in order to receive, process, and display such content received);

a output interface, communicatively coupled to the processor, configured to provide an output for rendering by a display device (television 48-Fig.1; Col 5: lines 31-38); and

a memory configured to maintain (Col 5: lines 5-7, Col 4: lines 33-43 teaches a processor that handles tasks associated with implementing a guide application, and the user device receiving different types of information, *therefore, the user device inherently has some sort of memory to store information and instructions to implement a guide application*):

an EPG engine that is executable on the processor to provide an EPG for output on the output interface (Col 5: lines 5-7 teaches a program guide application handled and implemented by the processor. Col 5: lines 31-38 teaches presenting the program guide on the television 48-Fig.1), wherein the EPG simultaneously displays a plurality of representations of said content for selection (Fig.10; Col 6: lines 12-19, Col 7: line 63 - Col 8: line 6, Col 9: lines 5-14); and

selection of said content represented by the EPG (Fig.10; Col 5: lines 31-48, Col 6: lines 12-28, Col 9: lines 5-10, lines 62-67 teaches selecting and providing the content represented on the EPG);

Knudson'823 does not explicitly teach a plurality of applications that are executable on the processor to provide an output of content on the output interface, wherein at least one said content is television programming received at the network interface;

a virtual tuner that is executable on the processor to launch one or more of said plurality of applications in response to selection of said content represented by the guide, independent of any application identifying information originating from a computer distinct from the client, said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications.

In an analogous art D'Souza teaches, memory (memory 212-Fig.2) configured to maintain:

a plurality of applications that are executable on the processor to provide an output of content on the output interface, wherein at least one said content is television programming received at the network interface (Software programs 214, 216, 218, 220 – Fig.2; Paragraph 0021 teaches receiving video programming via network interface 208-Fig.2; Paragraph 0029-0030, 0037-0038 teaches different applications that may be executed to provide content outputted to the display device for display to the client, where the content can be video programming);

a virtual tuner that is executable on the processor to launch one or more of said plurality of applications in response to selection of said content using the

guide, independent of any application identifying information originating from a computer distinct from the client (application launcher 220-Fig.2; Paragraph 0029, 0037-0038 teaches software which manages the execution of each of the applications in response to selection of content utilizing the guide),

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Knudson'823s system to include the client includes a plurality of applications that are executable on the processor to provide an output of content on the output interface, wherein at least one said content is television programming received at the network interface; a virtual tuner that is executable on the processor to launch one or more of said plurality of applications in response to selection of said content using the guide, independent of any application identifying information originating from a computer distinct from the client, as taught by D'Souza, for the advantage of allowing a variety of desired content to be launched and played to the user independently by the system, providing a more intuitive, versatile, and robust system having greater control and management over execution of content.

Knudson'823 and D'Souza do not explicitly teach said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications.

In an analogous art Jerding'616 teaches, a virtual tuner utilizing an application identification table that includes a listing of one or more applications

to enable execution of each of said plurality of applications (Col 11: lines 39-56; Col 10: lines 40-54; Col 11: lines 42-46).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823 and D'Souza to include a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications, as taught by Jerding'616, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client.

Consider **claim 27,** Knudson'823, D'Souza, and Jerding'616 teach manage one or more windows corresponding to the plurality of applications; and at least one of said window includes display of the selected said content (D'Souza - Paragraph 0033).

Consider **claim 28,** Knudson'823, D'Souza, and Jerding'616 teach the network interface is configured as a tuner for receiving one or more broadcasts of the television programming over the WAN; and the WAN is configured as a broadcast network (Knudson – Col 4: lines 33-52; D'Souza - Paragraph 0020-0021 teaches multiple customer set top boxes connected to the distribution network where they receive audio, video, and other types of data sent by the headend).

Consider **claim 29,** Knudson'823, D'Souza, and Jerding'616 teach wherein the content provided by a first said application is not compatible with a second said application (D'Souza - Paragraph 0037-0038 teaches launching different applications based on the type of content that is to be played. *Therefore, only their corresponding application can play the selected content, so content that is executable by one application is not executable by another*).

11. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Jerding (US 6,738,982) herein after referred to as Jerding'982.

Consider **claim 26,** Knudson'823, D'Souza, and Jerding'616 teach do not explicitly teach wherein the virtual tuner is further executable to terminate execution of the one or more said applications.

In an analogous art Jerding'982 teaches, wherein a virtual tuner is further executable to terminate execution of the one or more said applications (erding'982 - Col 3: lines 19-27 teaches service application manager (SAM) Fig.2, 29 that handles the lifecycle of applications on the system, including suspension and deletion of services).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823, D'Souza, and Jerding'616 to include wherein a virtual tuner is further executable to terminate execution of the one or more said applications, as taught by Jerding'982, for the advantage of efficiently controlling the activation, suspension, and deletion of applications (Jerding'982 - Col 3: lines 25-27), optimizing the control and the use of resources available to the client device in order to save system resources.

12. **Claim 30** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Knudson et al. (6,526,577) herein after referred to as Knudson'577.

Consider **claim 30,** Knudson'823, D'Souza and Jerding'616 do not explicitly wherein the WAN is the Internet.

In an analogous art, Knudson teaches a WAN is the Internet (Col 5: lines 34-50 teaches video signals, e.g. television programs, that is distributed over communications path Fig.2c, 20. Communications path 20 may be an Internet link).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Knudson'823, D'Souza, and Jerding'616 to have the WAN as the internet, as taught by Knudson, for the advantage of providing

programming to users that might otherwise be unable to receive programming over the air and do not have cable.

13. **Claim 31** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Hassell et al (2007/0033615).

Consider **claim 31,** Knudson'823, D'Souza, and Jerding'616 teach wherein the content includes remote content available over the WAN (D'Souza - Paragraph 0021, 0027), but does not explicitly teach local content available locally on the client.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Knudson'823, D'Souza, and Jerding'616 to include local content available locally on the client, as taught by Hassell, for the advantage of

providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

14. **Claims 32 and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassell et al. (US 2007/0033615), in view of D'Souza et al. (US 2006/0117348), and further in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616.

Consider **claim 32,** Hassel teaches a system comprising:

a network (Fig.1; Paragraph 0017-0019);

an EPG provider communicatively coupled to the network including remote EPG data that describes remote content that is available over the network, the remote content including television programming (Fig.1; Paragraph 0017-0019);

a client communicatively coupled to the network (Fig.1; Paragraph 0017-0019 teaches receiving information from the network, *therefore it is communicatively coupled to the network*); and including:

one or more processors and application that is executable thereon to provide at least one of local content and the remote content for rendering on a display device, wherein the EPG includes a plurality of representations, and wherein at least one said representation represents the remote content and another said representation represents the local content (Paragraph 0024-0027

teaches processing circuitry that instructs a program guide implemented on user equipment to generate a program guide display screen. Fig.5b, Paragraph 0038 teaches program listings that indicates currently stored program on a storage device {local content} and program listings indicating other television programs {remote content}. Paragraph 0022 teaches that the storage device can be contained in set-top box 28-Fig.2. Paragraph 0041 teaches that the user may select a stored program {local content} for playback and Paragraph 0026 teaches allowing a user to watch television from a desired television channel {remote content} on monitor 45-Fig.3); and

local EPG data that describes the local content (Paragraph 0038 teaches program listings that indicates currently stored programs on a storage device. Paragraph 0022 teaches that the storage device can be contained in set-top box 28-Fig.2);

a guide application that is executable to generate an EPG from the remote and local EPG content that is configured to initiate one or more events, the remote and local EPG content simultaneously displayed by the EPG, and wherein the guide application is further executable to generate the local EPG data by examining the client (Fig.5b; Paragraph 0038-0040 teaches an EPG containing programs from storage device and programs from outside sources. Paragraph 0041 teaches a user selecting a stored program listing and the EPG issuing commands in response to the selection. Paragraph 0021 teaches storing directory information about the content stored on the storage device, and

paragraph 0038. *In order for the directory information of available stored program(s) to be shown, the guide application must examine the client first in order to retrieve the necessary information to generate the guide*); and

selection of said content represented by the EPG (Fig.10; Col 5: lines 31-48, Col 6: lines 12-28, Col 9: lines 5-10, lines 62-67 teaches selecting and providing the content represented on the EPG);

Hassel does not explicitly teach a plurality of applications that are executable thereon, wherein said content provided by a first said application is not compatible with a second said application; and

a virtual tuner that is executable to manage one or more said plurality of applications in response to selection of said content represented by the guide, said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of the plurality of applications independent of any application identifying information originating from a computer distinct from the client.

In an analogous art D'Souza teaches, a plurality of applications that are executable thereon, wherein said content provided by a first said application is not compatible with a second said application (Software programs 214, 216, 218, 220 – Fig.2; Paragraph 0021 teaches receiving video programming via network interface 208-Fig.2; Paragraph 0029-0030, 0037-0038 teaches different applications that may be executed to provide content outputted to the display

device for display to the client, where the content can be video programming. Paragraph 0022 teaches OS software in addition to various application software that are executed on set top terminal 202-Fig.2. *The fact that multiple applications are needed to launch different types of content and the content is first checked to determine what type of content it is prior to choosing the correct application to launch it, means that content that is provided by a first application is not compatible with a second application*); and

a virtual tuner that is executable to manage one or more said plurality of applications in response to selection of said content represented by the guide (application launcher 220-Fig.2; Paragraph 0029, 0037-0038 teaches software which manages the execution of each of the applications in response to events formed utilizing the guide), independent of any application identifying information originating from a computer distinct from the client (application launcher 220-Fig.2; Paragraph 0029, 0037-0038 teaches software which manages the execution of each of the applications in response to selection of content utilizing the guide).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Hassel's system to include a plurality of applications that are executable thereon, wherein said content provided by a first said application is not compatible with a second said application; and a virtual tuner that is executable to manage one or more said plurality of applications in response to selection of said content represented by the guide, independent of any

application identifying information originating from a computer distinct from the client, as taught by D'Souza, for the advantage of allowing a variety of desired content to be launched and played to the user independently by the system, providing a more intuitive, versatile, and robust system having greater control and management over execution of content.

Hassel and D'Souza do not explicitly teach said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of the plurality of applications.

In an analogous art Jerding'616 teaches, a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of the plurality of applications (Col 11: lines 39-56; Col 10: lines 40-54; Col 11: lines 42-46).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Hassel and D'Souza to include a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of the plurality of applications, as taught by Jerding'616, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client.

Consider **claim 37,** Hassel, D'Souza, Jerding'616, and Hassell teach manages one or more windows that include a display of at least one of local and remote content (D'Souza - Paragraph 0033; Hassell - Fig.5b; Paragraph 0038-

0041 teaches an EPG containing programs from storage device and programs from outside sources where upon selection can be displayed for play for the user).

15. **Claim 33** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hassell et al. (US 2007/0033615), in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Hoarty et al. (6,305,020).

Consider **claim 33,** Hassel, D'Souza, and Jerding'616 teach launching one or more of the plurality of applications to process at least one of the local and remote content (Hassell - Fig.5b; Paragraph 0038-0040 teaches an EPG containing programs from storage device and programs from outside sources. Paragraph 0041 teaches a user selecting a stored program listing and the EPG issuing commands in response to the selection; D'Souza - Paragraph 0029, 0037-0038; Paragraph 000021).

Hassel, D'Souza, and Jerding'616 do not explicitly teach terminating the one or more applications when the provision of the content is completed.

In an analogous art, Hoarty teaches terminating the one or more applications when the provision of the content is completed (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over, the program follows the steps of call take down {termination} as described in col 9: lines 64-11)

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Hassel, D'Souza, and Jerding'616 to include terminating the one or more applications when the provision of the content is completed, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

16. **Claim 36** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hassell et al. (US 2007/0033615), in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Jerding (US 6,738,982) herein after referred to as Jerding'982.

Consider **claim 36,** Hassel, D'Souza, and Jerding'616 do not explicitly teach wherein the virtual tuner manages a lifecycle of each said application.

In an analogous art Jerding'982 teaches, manage a lifecycle of each said application (Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Hassel, D'Souza, and Jerding'616 to include manage a lifecycle of each said application, as taught by Jerding'982, for the advantage of efficiently controlling the activation, suspension, and deletion of applications (Jerding'982 - Col 3: lines 25-27), optimizing the control and the use of resources available to the client device.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. LIN whose telephone number is (571)270-1446. The examiner can normally be reached on 10AM - 6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Pendleton can be reached on (571)272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Lin/
Examiner, Art Unit: 2425

/Hunter B. Lonsberry/
Primary Examiner, Art Unit 2421